

THE GOVERNMENT OF
THE PROVINCE OF BRITISH COLUMBIADEPARTMENT OF MINES AND PETROLEUM RESOURCES
VICTORIABox 877,
Smithers, B.C.
4 October 1974

2212

93L/15W

Dr. S. S. Holland,
Chief, Geological Division,
Mineral Resources Branch,
Department of Mines and
Petroleum Resources,
Parliament Buildings,
Victoria, B.C. V8V 4S2

Dear Sir,

Please find enclosed a report summarizing my visit and examination on September 18th and 19th of the "UPPER" showings at the Cronin Mine in the Babine Range, 18 air miles northeast of Smithers. I understand from Nick that the samples taken are being assayed at this time.

I might point out that winter has come early to the area. Three men remain on the site awaiting a decision from their Board of Directors concerning a possible option agreement or shut-down for the winter.

Yours very truly,

A handwritten signature in cursive script that reads 'Tom Schroeter'.

Tom Schroeter,
District Geologist

TS/hh

Encls.

Handwritten initials, possibly 'JH', in a stylized cursive font.

93L 1A7-07
PROPERTY FILE

October 3rd 1974

Mr. T. G. Schroeter,
District Geologist,
P.O. Box 877,
SMITHERS, B.C.

CONFIDENTIAL

Dear Mr. Schroeter:

Re: CRONIN APPRAISAL

I have received the attached directive and have requested Jim Hutter to assist you in the appraisal.

Yours sincerely,



JAMES T. FYLES
Associate Deputy Minister - Mineral Resources

JTF:bg

Att: Xerox L.I. 10524

c.c. Dr. Holland ✓

REC'D	
Rec'd	10/74

relayed to me.

StH
NCC

MEMORANDUM

TO: Dr. J. T. Fyles,
Associate Deputy Minister
Mineral Resources Division

FROM THE DEPUTY MINISTER
DEPARTMENT OF MINES
AND PETROLEUM RESOURCES

VICTORIA, B.C., October 1, 1974

Reference: Cronin Mine
Your Memorandum September 30.

Please ensure that security is maintained with regard to sampling and assaying and there should be no release of any information regarding government participation.

J. E. McMynn
J. E. McMynn,
Deputy Minister.

OCT - 2 '74 AM



JEM:DB

*Nick tells me that the group arrived
10:24
Inlet in the first paragraph is almost certain - probably
Hallmark Resource Ltd. 10/10/74*

DEPT. OF MINES
AND PETROLEUM RESOURCES

MEMORANDUM

TO Dr. Stuart S. Holland,
Chief, Geological Division

FROM THE

**DEPARTMENT OF MINES
AND PETROLEUM RESOURCES**

VICTORIA, B.C., September 30th, 1974

WHEN REPLYING PLEASE REFER
TO FILE NO. 871

2162
Re. Cronin mine 93L/15W

In response to a request from Mr. McMynn please ask Tom Schroeter to make an economic evaluation of the Cronin mine. Attached is a recent report prepared by F.L. Groteau on the property. The appraisal should include sampling of the upper showings which have been recently uncovered by bulldozer. It is requested that the area of the bulldozer stripping be cleaned by pick and shovel to bedrock to expose the geology and to enable a representative sample to be taken.

I understand that the Government may wish to participate in the development of this property. As you know, Tom Schroeter was contacted by 'phone on September 27th and requested to make an evaluation concentrating on the new showings.

He has already submitted a number of samples for assay.

James T. Fyles

JAMES T. FYLES
Associate Deputy Minister

JTF:bg

Att: Report - Sept. 20th 74

c.c. J.E. McMynn

RECEIVED
SEP 30 1974

*SH
NCC*

- ① please expedite
- ② send copy of report to Tom
- ③ phone him

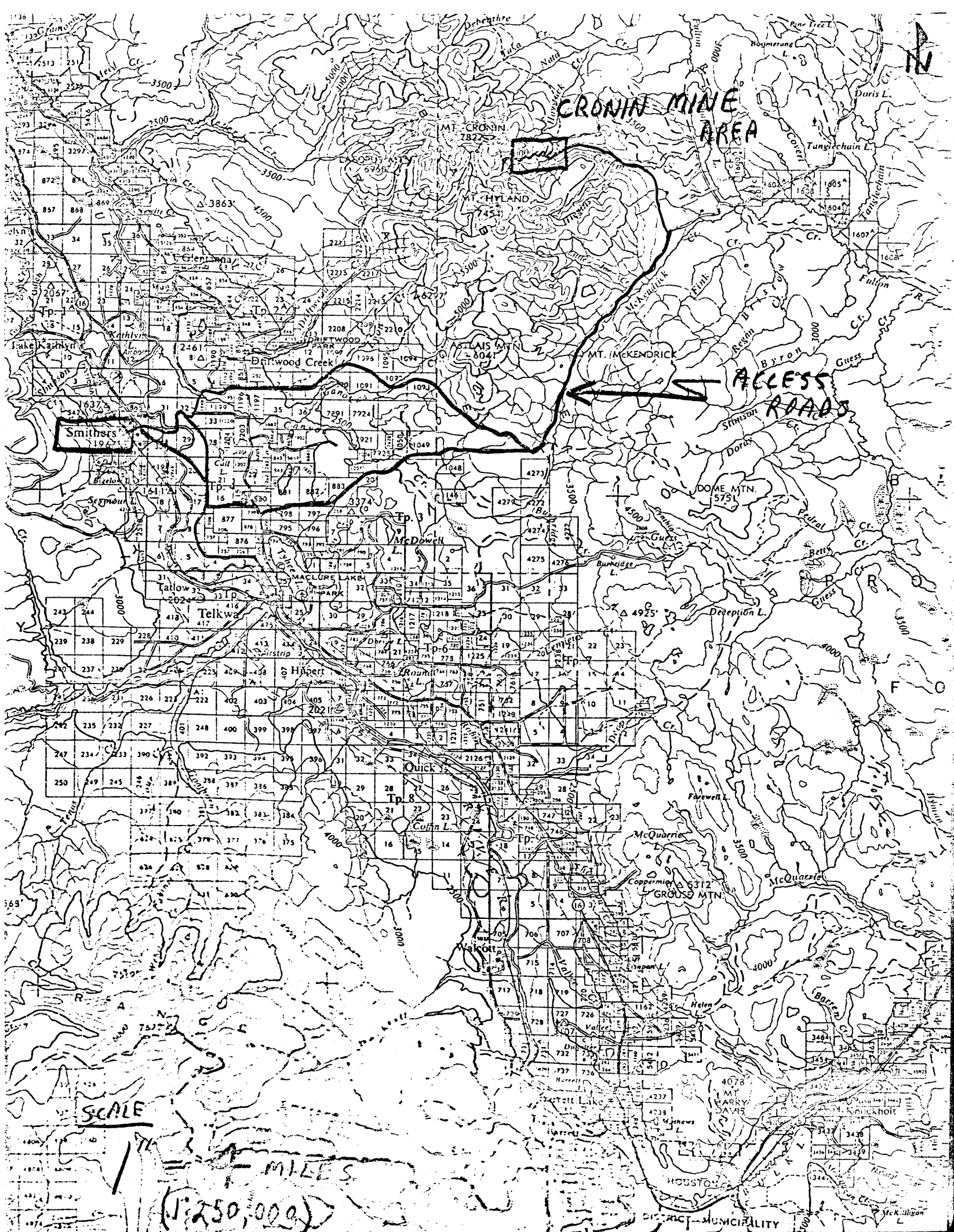
T A B L E 1

DESCRIPTION OF SAMPLES FROM THE "UPPER" SHOWINGS - CRONIN

Ag.	Pb	Zn	<u>SAMPLE NUMBER</u>	<u>DESCRIPTION</u>
22.4	12.5	0.025	C - 1	Black mud 5" thick overlying rhyolite.
1.4	0.25	0.01	C - 2	Chip sample over 30 ft. in rhyolite (bearing 115°).
0.4	0.23	0.10	C - 3	Grab sample of best mineralization in rhyolite.
2.8	0.23	0.35	C - 4	Chip sample over 60 ft. in rhyolite (bearing 025°). Black mud plus pyrite overburden.
2.5	0.35	0.13	C - 5	Chip sample over 30 ft. in rhyolite in contact with well foliated phyllite (bearing 090°).
0.7	0.05	0.4	C - 6	Rock specimen of rhyolite.
46.4	11.5	2.25	C - 7	Chip sample over 100 feet along Wardell vein (bearing 030°).
0.4	0.01	0.038	C - 8	Chip sample over 80 ft. in rhyolite.
2.2	1.06	0.05	C - 9	Chip sample over 25 ft. in quartz filled zone in rhyolite. Attitude of quartz veins - 090°/60°N.
			C - 10	Grab sample over 3 ft. wide quartz vein with attitude 095°. Near rhyolite-argillite contact.
			C - 11	Grab sample of light green coloured sericite schist.
20.7	6.81	0.138	C - 12	Chip sample over 15 ft. wide quartz vein with bearing 095° in rhyolite. Good galena and sphalerite mineralization.
20.0	13.1	0.10	C - 13	High-grade vein area sampled across strike over 60 ft. Galena and sphalerite.
Yr.	0.06	0.05	C - 14	Chip sample over 100 ft. across quartz veined area in rhyolite (bearing 045°).
1.8	1.0	0.94	C - 15	Chip sample over 50 ft. of high-grade zone in quartz veined rhyolite. Good galena and sphalerite mineralization.
7.1	7.31	0.05	C - 16	Chip sample over 3 ft. wide quartz vein with massive sulphides. Host rock is rhyolite. Attitude of vein is 110°/80°NE.
Yr.	0.01	0.063	C - 17	Chip sample over 175 ft. (chips every 25 ft.) in rhyolite.
Yr.	11.9	0.813	C - 18	Chip sample over 1 foot of high-grade quartz vein in argillite near contact with diorite lamprophyre dyke.
0.2	0.01	0.015	C - 19	Chip sample over 3 ft. across diorite lamprophyre dyke.
Yr.	0.01	0.01	C - 20	Chip sample over 4 ft. of diorite lamprophyre dyke into argillite.
32.3	17.5	0.213	C - 21	Chip sample over 4 inches of flat lying high-grade quartz vein in sericite schist. Attitude quartz vein is 115°/17°NE.

Description of Samples from the "UPPER" Showings - Cronin

<u>SAMPLE NUMBER</u>				<u>DESCRIPTION</u>
4.0	1.75	1.15	C - 22	Grab sample of high-grade quartz vein in sericite schist.
48.6	33.1	0.62	C - 23	Grab sample of high-grade quartz vein 3 ft. wide outside caved adit.
322.4	18.8	8.88	C - 24	Chip sample over 4 ft. of Wardell vein with massive galena and sphalerite plus freibergite.
			C - 25	Massive sulphide sample from Wardell vein with sphalerite. Assay for iron (Fe) content in sphalerite.
				Fe. 5.5 ± 1 Cd. 1.0 ± 0.25



CRONIN MINE AREA

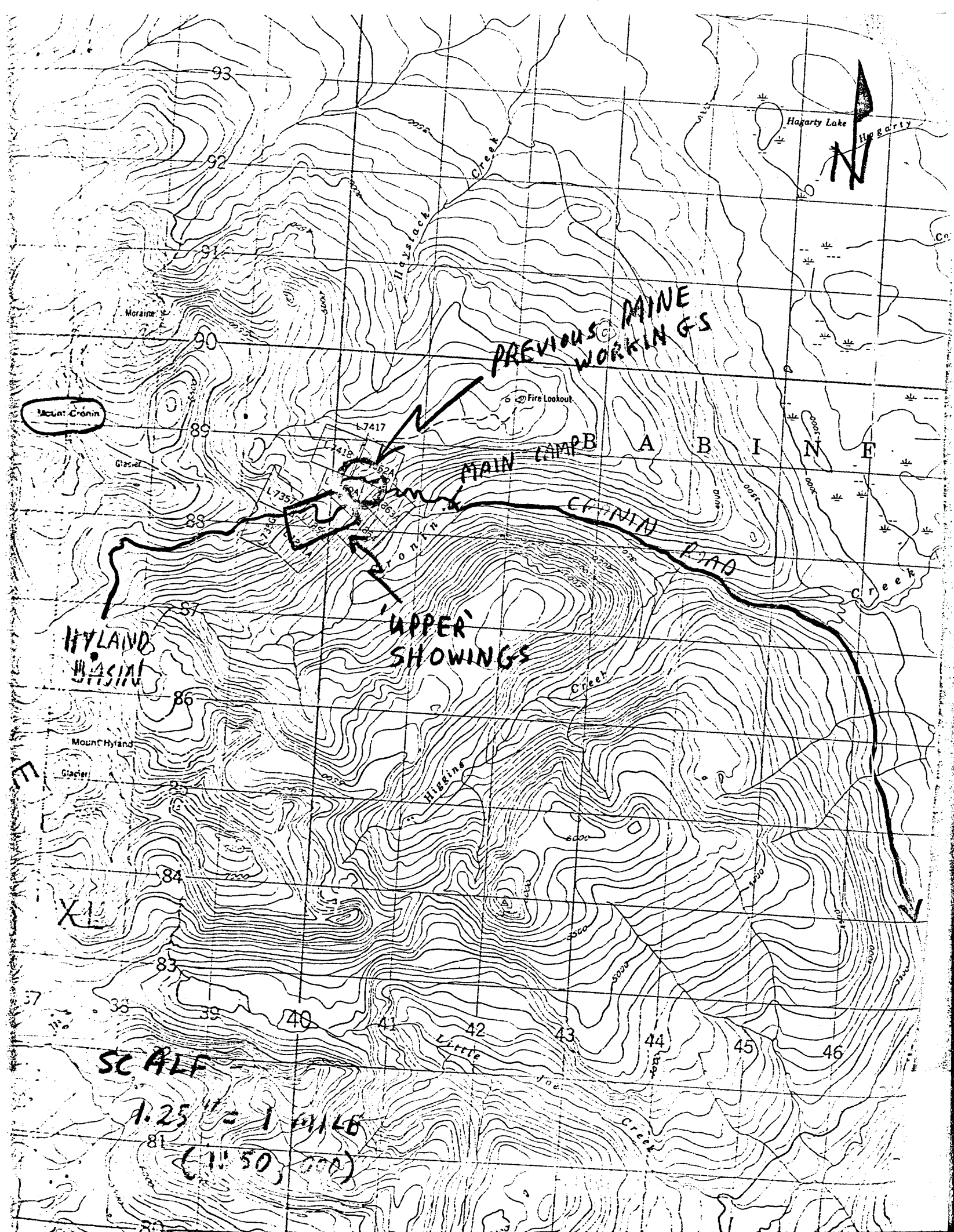
ACCESS ROADS

Smithers 196

SCALE

1" = 1 MILE
(1:250,000)

HOUSTON DISTRICT MUNICIPALITY



Mount Cronin

PREVIOUS MINE WORKINGS

MAIN CAMP A B I N E

UPPER SHOWINGS

CRONIN ROAD

HYLAND BASIN

SCALE

1.25" = 1 MILE
(1:50,000)



DEPARTMENT OF MINES AND PETROLEUM RESOURCES
VICTORIA

SAMPLE RECEIVED FROM..... T. SCHROETER (N. C. Carter)

From Census.

ADDRESS..... Geological Division

LABORATORY No.	SUBMITTER'S MARK	LABORATORY REPORT					
		Au oz/T	Ag oz/T	Cd %	Cu %	Pb %	Zn %
14280M	C- 1	0.07	22.4	<0.01	<0.01	12.5	0.025
14281M	C- 2	0.01	1.4	<0.01	<0.01	0.25	<0.01
14282M	C- 3	0.01	0.4	<0.01	<0.01	0.23	0.100
14283M	C- 4	0.01	2.8	<0.01	<0.01	0.23	0.350
14284M	C- 5	0.01	2.5	<0.01	<0.01	0.35	0.013
14285M	C- 6	Tr	0.7	0.01	<0.01	0.05	0.400
14286M	C- 7	0.05	46.4	0.03	0.125	11.5	2.25
14287M	C- 8	Tr	0.4	<0.01	<0.01	<0.01	0.038
14288M	C- 9	0.05	2.2	<0.01	<0.01	1.06	0.050
14289M	C-12	0.03	20.7	<0.01	0.036	6.81	0.138
14290M	C-13	0.03	20.0	<0.01	0.038	13.1	0.100
14291M	C-14	Tr	Tr	<0.01	<0.01	0.06	0.050
14292M	C-15	0.01	1.8	0.019	0.037	1.00	0.938
14293M	C-16	0.11	7.1	<0.01	<0.01	7.31	0.050
14294M	C-17	Tr	Tr	<0.01	<0.01	<0.01	0.063
14295M	C-18	Tr	Tr	<0.01	0.064	11.9	0.813
14296M	C-19	Tr	0.2	<0.01	<0.01	<0.01	0.015
14297M	C-20	Tr	Tr	<0.01	<0.01	<0.01	<0.01
14298M	C-21	0.10	32.3	<0.01	0.026	17.5	0.213
14299M	C-22	0.04	4.0	0.015	0.026	1.75	1.15
14300M	C-23	0.02	48.6	0.019	<0.01	33.1	0.625
14301M	C-24	0.09	322.4	0.162	0.88	18.8	8.88
		<u>Fe %</u>		<u>Cd %</u>			
14302M	C-25	5.5 ± 1%		1.0 ± 0.25%			

THIS DOCUMENT, OR ANY PART THEREOF, MAY NOT BE REPRODUCED
FOR PROMOTIONAL OR ADVERTISING PURPOSES.

DATE..... October 9, 1974.....

W. M. Johnson
CHIEF ANALYST AND ASSAYER.



THE GOVERNMENT OF
THE PROVINCE OF BRITISH COLUMBIA

WHEN REPLYING PLEASE REFER TO

FILE NO.

2324

MINERAL RESOURCES BRANCH
DEPARTMENT OF MINES AND PETROLEUM RESOURCES

Box 877,
Smithers, B.C.
18 October 1974

Dr. S. S. Holland,
Chief, Geological Division,
Mineral Resources Branch,
Department of Mines and
Petroleum Resources,
Parliament Buildings,
Victoria, B.C. V8V 4S2

Dear Sir,

Please find enclosed two short reports entitled as follows:

- 1) Discussion on assay results from samples taken from the UPPER Showings - Cronin Mine, September 1974.
- 2) Discussion on geological report on the Cronin Mine by F. L. Croteau - dated 20 September 1974.

Yours very truly,

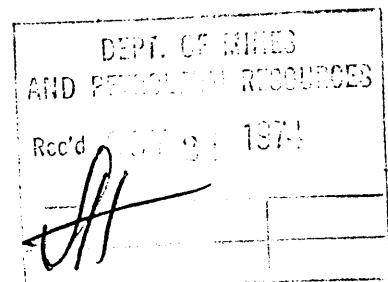
Tom Schroeter

Tom Schroeter,
District Geologist

TS/hh

Encls.

cc: Dr. N. C. Carter, Senior Geologist



DISCUSSION ON ASSAY RESULTS FROM SAMPLES TAKEN FROM
THE U P P E R SHOWINGS - CRONIN MINE, SEPTEMBER 1974

In general, the assays received were what I expected. Below I will briefly describe my opinions concerning the correlation between sample description and assay:

- C- 1 Significant assays from black mud overlying rhyolite.
 - would aid in further soil sampling programs in the
 area.

- C- 2 Weak assays in relatively barren looking rhyolite.
 Possible leaching.

- C- 3 Surprised. Wrong specimen or sample number?

- C- 4 Weak assays in relatively barren looking rhyolite.
 Possible leaching. Black mud overlying rhyolite-
 significant.

- C- 5 Weak assays. No observable mineralization.

- C- 6 Barren rhyolite.

- C- 7 'High-grade' primary sulphide material plus leached
 sulphide material (in rhyolite) taken along strike of
 Wardell vein. Compare with sample C-24 taken across
 the vein.

- C- 8 Barren rhyolite with minor quartz veining.

- C- 9 Weak assays in relatively barren looking rhyolite
 with the exception of small mineralized quartz veins.

DISCUSSION ON ASSAY RESULTS FROM SAMPLES TAKEN FROM THE UPPER SHOWINGS -
CRONIN MINE, SEPTEMBER 1974.

- C-12 Good assays from well mineralized (PbS-ZnS) quartz vein in rhyolite.
- C-13 Good assays from rhyolite breccia zone consisting of numerous small mineralized (PbS-ZnS) quartz veins.
- C-14 Barren rhyolite breccia zone with small quartz veins. Possible leaching.
- C-15 Weak assays from chips taken over high-grade quartz vein (PbS-zNS) plus leached rhyolite. Leaching is significant.
- C-16 Good assays from high-grade massive sulphide vein sampled 6 feet below surface (trench-dug-out). Silver content is lower than average. Gold content is interesting.
- C-17 Barren rhyolite. No mineralization observed. Possible leaching.
- C-18 Good lead assay from small quartz vein with galena. Very poor silver correlation. Therefore, silver-poor galena. Good correlation between lead and silver assays from other samples.
- C-19 Barren (post mineral) diorite lamprophyry dyke.
- C-20 Barren (post mineral) diorite lamprophyry dyke.

DISCUSSION ON ASSAY RESULTS FROM SAMPLES TAKEN FROM THE UPPER SHOWINGS -
CRONIN MINE, SEPTEMBER 1974.

- C-21 Good assays from high-grade quartz vein in sericite schist. Gold assay interesting. This quartz vein was the only relatively flat-lying or slightly dipping vein observed. The vein was near the contact of sericite schist and foliated black argillite.
- C-22 Weak assays from mineralized quartz vein in sericite schist.
- C-23 Good assays from grab sample of mineralization outside a caved adit in the vicinity of the Eureka Showings. Illustrates strike continuity of mineralization.
- C-24 Very high (above average) assays from high-grade massive sulphide sample (4 feet in width) containing galena, sphalerite and freibergite. Silver assay is particularly high. If lateral and vertical continuity existed for this Wardell vein, it would be very significant.
- C-25 Not much sphalerite in UPPER Showings. Sample assayed was the best one I could find.

AVERAGE ASSAY VALUES

From the limited assays obtained from the UPPER Showings sampling program and those quoted previously in reports about the Cronin Mine, the following assays may be 'typical' for the mine:

	<u>UNDERGROUND</u>	<u>SURFACE</u>
Au (oz./ton)	0.01 to 0.10	0.03 to 0.11
Ag (oz./ton)	12 to 22	7 to 30

DISCUSSION ON ASSAY RESULTS FROM SAMPLES TAKEN FROM THE UPPER SHOWINGS -
CRONIN MINE, SEPTEMBER 1974.

	<u>UNDERGROUND</u>	<u>SURFACE</u>
Pb (%)	8 to 20	7 to 15
Zn (%)	9 to 15	0.5 to 2
Cd (%)	0.25	< 0.01

No underground copper assays are included. All copper assays for surface samples are insignificant with the exception of C-24 (0.88% Cu).

Significantly, zinc and consequently cadmium assays are low on surface compared to underground.

The expected average width which the above assay figures might represent would be in the order of 3 to 4 feet.

SUGGESTIONS FOR FURTHER SAMPLING

The location and trends of the major sulphide-bearing quartz veins is pretty well established. Perhaps more detailed sampling of these veins could be done to test their lateral continuity. However, I don't think this would be necessary.

The next question is: "What about the areas in between the quartz veins, including rhyolite breccia zones where galena and sphalerite fill fractures?" I think that leaching and oxidation on surface has been profound and thus the sampling of such may not be of true value. In order to test the possibility of a large tonnage, low-grade, type situation, a diamond drilling program is required.

CONCLUSIONS

Sampling of the UPPER Showings has demonstrated the existence of several "high-grade" sulphide-bearing quartz veins. It has also shown that much of the host rhyolite rock has been leached and oxidized. There appears to be little doubt as to the need for a well planned intensive diamond drill program to test the vertical continuity of known veins and also

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DISCUSSION ON ASSAY RESULTS FROM SAMPLES TAKEN FROM THE UPPER SHOWINGS -
CRONIN MINE, SEPTEMBER 1974.

the possibility of outlining an area of high tonnage, low-grade
material.

Respectfully submitted,

A handwritten signature in cursive script that reads "Tom Schroeter". The signature is written in dark ink and is positioned below the typed name.

Tom Schroeter,
District Geologist,
Department of Mines and
Petroleum Resources,
Smithers, B.C.

18 October 1974